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| 09/821,640      | 03/29/2001  | Guei-Yuan Lueh       | 42390P9758          | 5724             |

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR  
LOS ANGELES, CA 90025

EXAMINER

KANG, INSUN

ART UNIT PAPER NUMBER

2124

DATE MAILED: 04/22/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Sf

## Office Action Summary

Application No.

09/821,640

Applicant(s)

LUEH ET AL

Examiner

Insun Kang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/29/2001 and 4/30/2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/29/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. This action is responding to application papers dated 3/29/2001 and 4/30/2001.
2. Claims 1-24 are pending in the application.

#### ***Specification***

3. The use of the trademark JAVA has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 6, 13, 14, 21 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5, 6, 13, 14, 21 and 22 contain the trademark/trade name JAVA. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used

properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a JAVA and, accordingly, the identification/description is indefinite.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Ogasawara (US Patent 6,671,877).

Per claim 1:

Ogasawara discloses:

- storing native code associated with a first method within a native code space (“JITed codes are managed in memory,” col 1 lines 50-57; “generates and stores into a storage a code for recording a method call which is actually issued,” col 3 lines 10-45);

- determining whether said native code space exceeds a threshold in response to an invocation of a second method ("if a memory request of a JIT compiler cannot be met in a certain thread," col 4 lines 8-21; col 1 lines 50-60; "utilizing ...execution time information a degree of how readily a nonactive method is called (an activity degree)," col 3 lines 52-65)
- reclaiming said native code ("A JITed code discarding policy is "to discard JITed codes that are not expected to be used immediately." It can be expected that a method of a low activity degree will not be called for awhile. If [JI]Tted codes of methods not called for awhile are discarded, the amount of free memory used by them should be available for a long time," col 4 lines 45-60) associated with said first method and compiling byte code into native code associated with said second method in response to said determination("an activity degree is allocated to all the methods, A JIT compiler discards JITed codes whose activities are lower...and continues compilation," col 6 lines 64-67)

as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Ogasawara discloses:

- reclaiming said native code associated with said first method in response to a determination that said native code space exceeds said threshold ("if a memory request of a JIT compiler cannot be met in a certain thread...based on such an activity degree,

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some or all of JITed codes of a nonactive method are discarded,” col 4 lines 8-21; col 1 lines 50-60)

as claimed.

Per claim 3:

The rejection of claim 2 is incorporated, and further, Ogasawara discloses:

-storing said native code associated with said second method within said native code space in response to said compilation(“a second method which has a high possibility that the second method is actually called from a first method corresponding to a stack frame is specified and stored into a storage by using the calling map and information concerning method calls which are actually issued for the first method,” col 3 lines 23-45)

as claimed.

Per claim 4:

The rejection of claim 2 is incorporated, and further, Ogasawara discloses:

-invoking said first method following said reclamation and re-compiling ...in response to said invocation of said first method (“A JIT compiler discards JITed codes whose activities are lower, restarts thread execution, and continues compilation,” col 6 lines 64-67; “discarding a code to be effectively selected, frequency of recompile of an identical method could successfully be lowered and compile overhead reduce,” col 7 lines 45-50; abstract) as claimed.

Per claim 5:

The rejection of claim 2 is incorporated, and further, Ogasawara discloses:

- utilizing a JAVA virtual machine (col 7 line 20) as claimed.

Per claim 6:

The rejection of claim 5 is incorporated, and further, Ogasawara discloses:

- compiling byte code into native code associated with said second method utilizing a just-in-time compiler ("compilation by a JIT compiler," col 4 lines 56-58) as claimed.

Per claim 7:

The rejection of claim 2 is incorporated, and further, Ogasawara discloses:

- determining whether said first method is active or inactive ("calculating an active degree of a method...is used to decide an activity degree of each method," col 4 lines 8-21; "A JITed code discarding policy is "to discard JITed codes that are not expected to be used immediately." It can be expected that a method of a low activity degree will not be called for a while," col 4 lines 45-53)
- reclaiming said native code associated with said first method in response to a determination that said first method is inactive (...based on such an activity degree, some or all of JITed codes of a nonactive method are discarded," col 4 lines 8-21) as claimed.

Per claim 8:

The rejection of claim 7 is incorporated, and further, Ogasawara discloses:

-determining whether said first method is hot or cold in response to a determination that said first method is inactive("calculating an active degree of a method...is used to decide an activity degree of each method," col 4 lines 8-21; "A JITed code discarding policy is "to discard JITed codes that are not expected to be used immediately." It can be expected that a method of a low activity degree will not be called for a while," col 4 lines 45-53)

-reclaiming said native code associated with said first method in response to a determination that said first method is inactive comprises reclaiming said native code associated with said first method in response to a determination that said first method is cold(...based on such an activity degree, some or all of JITed codes of a nonactive method are discarded," col 4 lines 8-21)  
as claimed.

Per claims 9-16, they are the data processing system-readable medium versions of claims 1-8, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-8 above.

Per claims 17-24, they are the data processing system versions of claims 1-8, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-8 above.



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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 703-305-6465. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 703-305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IK

4/9/2004



**KAKALI CHAKI**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**